

ENGINEERING AND DESIGN TEXTBOOK

**BOLT-ON INSTALLATION AND CHECKOUT
PROCEDURES FOR THE HIGH-SECURITY HASP WITH
OR WITHOUT ANTI-INTRUSION BAR COVER**

(FORMERLY MIL-HDBK-1013/3)

JANUARY 1988

MILITARY HANDBOOK

BOLT-ON INSTALLATION AND CHECKOUT PROCEDURES
FOR THE HIGH-SECURITY HASP WITH OR WITHOUT
ANTI-INTRUSION BAR COVER



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ABSTRACT

This publication provides guidance to assist Public Works Centers and Departments in installing the high-security shrouded hasp (HSSH) with or without the anti-intrusion bar (AIB) system, using procedures that do not require welding. The HSSH is required by OPNAVINST 5530.13 for arms, ammunition, and explosives (AA&E) storage structures. Previously, AA&E storage structures would be emptied so that the HSSH could be welded on the doors. This was both time consuming and costly. The Naval Civil Engineering Laboratory (NCEL) developed a bolt-on design that provides a penetration-resistance time equivalent to that of the weld-on version. When the procedures for the HSSH bolt-on version are followed as defined, the penetration delay times required by OPNAVINST 5530.13 can be ensured.

MIL-HDBK-1013/3

FOREWORD

This military handbook has been developed from an evaluation of facilities in the shore establishment, from surveys of the availability of new materials and construction methods, and from selection of the best design practices of the Naval Facilities Engineering Command (NAVFACENGCOM), other Government agencies, and the private sector. It uses to the maximum extent feasible national professional society, association, and institute standards. Deviations from this criteria, in the planning, engineering, design, and construction of Naval shore facilities, cannot be made without prior approval of NAVFACENGCOMHQ Code 04.

Design cannot remain static any more than the functions it serves or the technologies it uses. Accordingly, recommendations for improvement are encouraged and should be furnished to the Naval Civil Engineering Laboratory, Code L30, Port Hueneme, CA 93043, telephone (805) 982-5743.

THIS HANDBOOK SHALL NOT BE USED AS A REFERENCE DOCUMENT FOR PROCUREMENT OF FACILITIES CONSTRUCTION. IT IS TO BE USED IN THE PURCHASE OF FACILITIES ENGINEERING STUDIES AND DESIGN (FINAL PLANS, SPECIFICATIONS, AND COST ESTIMATES). DO NOT REFERENCE IT IN MILITARY OR FEDERAL SPECIFICATIONS OR OTHER PROCUREMENT DOCUMENTS.

PHYSICAL SECURITY CRITERIA MANUALS

<u>Criteria Number</u>	<u>Title</u>	<u>PA</u>
MIL-HDBK-1013/1	Physical Security of Fixed Land-based Facilities	NCEL
DM-13.02	Commercial Intrusion Detection Systems (IDS)	LANTDIV
MIL-HDBK-1013/3	Bolt-on Installation & Check-out Procedures for High-Security Hasp W/WO Anti-Intrusion Bar Cover	NCEL
MIL-HDBK-1013/4	Instruction for Design, Fabrication and Construction/Installation of Secure Enclosures	NCEL
MIL-HDBK-1013/5	Steel-Ply Wall Hardening Selection and Installation Guide	NCEL
MIL-HDBK-1013/6	High-Security Internal Locking System, Description, Operation, and Maintenance (PROPOSED)	NCEL
MIIL-HDBK-1013/7	Security Hardware Install., Operation & Maint. (PROPOSED)	NCEL

NOTE: Design manuals, when revised, will be converted to military handbooks.

This handbook is issued to provide immediate guidance to the user. However, it may or may not conform to format requirements of MIL-HDBK-1006/3 and will be corrected on the next update.

BOLT-ON INSTALLATION AND CHECKOUT PROCEDURES
FOR THE HIGH-SECURITY HASP WITH OR WITHOUT
ANTI-INTRUSION BAR COVER

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Section 1: INTRODUCTION

1.1 Scope. This publication provides installation and checkout procedures for High-Security Shrouded Hasp (HSSH) with and without anti-intrusion bar (AIB) systems. Sufficient information is presented for personnel to install and check out bolt-on HSSH with and without AIB systems on magazine doors. THIS HANDBOOK SHALL NOT BE USED AS A REFERENCE DOCUMENT FOR PROCUREMENT OF FACILITIES CONSTRUCTION. IT IS TO BE USED IN THE PURCHASE OF FACILITIES ENGINEERING STUDIES AND DESIGN (FINAL PLANS, SPECIFICATIONS, AND COST ESTIMATES). DO NOT REFERENCE IT IN MILITARY OR FEDERAL SPECIFICATIONS OR OTHER PROCUREMENT DOCUMENTS.

1.2 Cancellation. This handbook supersedes no other publication.

1.3 General Safety Notices. Warnings and notes appearing throughout this publication are of paramount importance to personnel and system safety. These paragraphs supplement the specific warnings appearing within the text. They are recommended precautions that must be understood and applied during installation and maintenance of the system covered herein. Should a situation arise that is not covered in the general or specific safety precautions, the Commanding Officer or other authority will issue orders as deemed necessary to cover the situation.

1.3.1 Personnel Requirements. Do not install alone. Under no circumstances shall installation, repair, or adjustment of HSSH be attempted without the immediate presence of an individual capable of rendering aid.

1.3.2 First Aid and Resuscitation. An injury, no matter how slight, should never go unattended. Always get first aid or medical attention immediately. Should an individual stop breathing, initiate resuscitation immediately. A delay could cause the loss of life.

1.3.3 General Precautions.

(a) All signs and markings that pertain to safety measures shall be displayed.

(b) Personnel shall wear safety shoes, protective clothing and eye shields during installation, maintenance, removal, or replacement of HSSH.

(c) Full precautionary measures to prevent any explosive materials from being exposed to welding operations shall be taken.

(d) Proper working stands shall be provided to prevent the accidental dropping of the HSSH.

(e) All fabrication, installation, and maintenance actions shall comply with appropriate policies, procedures, and guidelines provided in the Command Safety and Health Program, Naval Facilities Engineering Command (NAVFAC) Instruction 5100.11, as well as all other pertinent NAVFAC 5100 series instructions.

1.3.4 Warnings. Warnings applying to the HSSH, as covered in this publication, are summarized below. These warnings are repeated throughout the publication following paragraph headings and preceding text where they apply.

WARNINGS

Do not perform any work on magazine doors if explosives are within 10 feet of the doors.
(Page 16)

Only tools listed in Table 5 shall be used for door alterations. (Page 16)

If specified by the Safety Director, it must be verified that the spark shield is in place and all gaps are securely taped before making door alterations. (Page 17)

Spark shield must be in place and taped completely to the door jamb. (Page 20)

Installation personnel must wear prescribed protective clothing. (Page 20)

1.4 Related Technical Documents. The following drawings should be obtained to use with this document:

(a) High-Security Hasp, Hinged or Sliding, Horizontal, RH MK 2 MOD 8. NAPEC drawing number 0957 (three sheets).

(b) Mounting Jig, High-Security Hasp, Hinged, MK 2 MOD 7. NAPEC drawing number 0961.

(c) Standard Plan - Installation Detail for Right-Hand Active Doors Using High-Security Hasp #0957. NAPEC drawing number 1297.

(d) Standard Plan - Anti-Intrusion Bar Installation Detail for Right-Hand Active Doors Using High-Security Hasp #0957. NAPEC drawing number 1302 (three sheets).

(e) High-Security Hasp Application and Installation Instructions for MK 2 MOD 9 Style 1. NAPEC drawing number 1403.

(f) High-Security Hasp, MK 2 MOD 9 Hinged or Sliding, Horizontal Door Right-Hand Style 1. NAPEC drawing number 5532334 (three sheets).

(g) AIB System for High-Security Hasp. NAPEC drawing number 53711-5532336 (five sheets).

These drawings are available from:

Naval Weapons Support Center
Code 208
Crane, IN 47522-5020
AV 482-1879

(h) Physical Security, High-Security Hasp (Bolt-On), Assembly and Details. NCEL drawing number 83-15-1F.

(i) Physical Security, High-Security Hasp (Bolt-On) w/AIB Cover, Assembly and Details. NCEL drawing number 83-16-1F.

These drawings are available from:

Naval Civil Engineering Laboratory
Physical Security Division (Code L56)
Port Hueneme, California 93043-5003

Section 2: BOLT-ON HIGH-SECURITY HASP WITH OR WITHOUT
ANTI-INTRUSION BAR COVER

2.1 Safety Precautions.

2.1.1 Warnings and Notes. Warnings and notes appearing throughout this publication are of paramount importance to personnel and system safety. Prior to any attempt to install or check out any part of HSSH, all warnings and notes shall be thoroughly reviewed and understood. Refer to Section 1: Introduction for a complete listing of warnings throughout this publication. The following paragraphs define warnings and notes as they are used in this publication.

WARNING

Identifies an installation or maintenance procedure, practice, condition, statement, etc., that, if not strictly followed, could result in death or serious injury to personnel.

NOTE

Highlights certain installation or maintenance statements that are essential but not of known hazardous nature as indicated by warnings.

2.1.2 Specific Precautions. Personnel responsible for the HSSH shall become thoroughly familiar with and frequently review the following specific safety precautions. These precautions apply to both personnel and equipment and are considered supplemental to the general precautions and specific warnings listed in Section 1: Introduction of this publication.

(a) Do not install or make any repairs to the hasp without first reading and understanding the appropriate portions of this publication.

(b) Personnel shall always wear protective eyeshields, clothing, and foot and head gear when installing, checking, removing, or replacing the HSSH.

2.2 Background. The HSSH with and without the AIB system provides a known level of resistance to forced entry. The HSSH without the AIB is authorized for use on magazines storing risk category III and IV arms, ammunition, and explosives (AA&E). The HSSH with AIB is authorized for risk category I and II AA&E. Present HSSH and AIB designs are welded to the magazine doors. NAVSEA OP 5 (Ammunitions and Explosives Ashore) requires that the magazine be emptied before using welding equipment. This costly and time-consuming procedure warranted the development of a mechanical attachment system for the HSSH and AIB to avoid removing all explosives from the magazine. Tests conducted on

mechanically attached (bolt-on) HSSHs and AIBs show that penetration resistance (time) is equivalent to that of weld-on systems. This publication was prepared to supply installation and check-out procedures for the bolt-on HSSH and AIB systems. Welding is the preferred method of installation for magazines. The bolt-on design is to be used only to avoid down-loading the magazine.

2.3 System Description. The hasp system, consisting of an externally-mounted hasp and padlock, is considered the primary point of attack by intruders because defeat of the system will allow the magazine door to be opened and permit large volumes of material to be removed in a short period of time. In addition, the hasp system is usually more vulnerable to attack with fewer and quieter tools than are walls and roofs. Each half of the hasp is welded to a 3/8-inch steel plate that is drilled and counterbored for 1/2-inch capscrews. After bolting the plates to the magazine doors, each nut is staked to the bolt so that the screw may rotate, but the nut will not loosen.

Section 3: MOUNTING AND INSTALLATION

3.1 Introduction. This section provides lists of parts and tools that can be used to install the HSSH and AIB systems on magazine doors. It also provides procedures for welding the hasp mounting plates, the actions required before and during any maintenance or repair work, the preparation required before alterations to a magazine door, the actual steps required for hasp installation, and the checkout procedures to verify completion of hasp installation.

3.2 Resources Required for Installation. Tables 1 through 4 are parts lists for four styles of hasps, and Table 5 lists tools for use in installing HSSH and AIB systems on magazine doors. Installation of the systems is covered for double-leaf, right-hand active doors. Installation on other types of double-leaf doors (left-hand active, single-leaf, sliding doors) is similar. These door types may be found in the Naval Ammunition Production Engineering Center (NAPEC) drawings listed in Paragraph 1.4.

Table 1
MK 2 MOD 8 HSSH (Bolt-On)

Item	Drawing No.	Nomenclature	Quantity
1	NAPEC 0957	Cover	1
2	NAPEC 0957	Clasp	1
3	NAPEC 0957	Shield, Bottom, Attack	1
4	NAPEC 0961	Jig, Mounting	1
5	NCEL 83-15-1F	Plate, Mounting, Left	1
6	NCEL 83-15-1F	Plate, Mounting, Right	1
7	NCEL 83-15-1F	Capscrew, 1/2-13, NC Grade 8	18
8	NCEL 83-15-1F	Lockwasher, 1/2	18
9	NCEL 83-15-1F	Nut, Hex, 1/2-13, NC Grade 8	18
10	NCEL 83-15-1F	Bar, Backing, 1 foot 3-3/4 inch	2

Table 2
MK2 MOD 8 HSSH With Anti-Intrusion Bar Cover (Bolt-On)

Item	Drawing No.	Nomenclature	Quantity
1	NAPEC 0957, Sht 2	Cover	1
2	NAPEC 0957, Sht 2	Clasp	1
3	NAPEC 0957, Sht 3	Shield, Bottom, Attack	1
4	NAPEC 0961	Jig, Mounting	1
5	NCEL 83-16-1F	Plate, Mounting, Left (large)	1
6	NCEL 83-16-1F	Plate, Mounting, Right (large)	1
7	NCEL 83-16-1F	Plate, Staple	1
8	NCEL 83-16-1F	Capscrew, 1/2-13, NC Grade 8	32
9	NCEL 83-16-1F	Lockwasher, 1/2	32
10	NCEL 83-16-1F	Nut, Hex, 1/2-13, NC Grade 8	32
11	NCEL 83-16-1F	Bar, Backing, 1-foot 3-3/4-inch	2
12	NCEL 83-16-1F	Bar, Backing, 6-1/2-inch	2
13	NCEL 83-16-1F	Bar, Backing, 4-inch	2
14	NAPEC 53711-5532336 Sht 2, Detail 13A	Housing, AIB	1
15	NAPEC 53711-5532336 Sht 2, Detail 10C	Staple, AIB	2
16	NAPEC 53711-5532336 Sht 2, Detail 10F	Lug, AIB	2
17	NAPEC 53711-5532336 Sht 3	Jackscrew, Inactive	1
18	NAPEC 53711-5532336 Sht 3, Detail 20F	Nut, Hold-Down	1
19	NAPEC 53711-5532336 Sht 4	Jackscrew, Active	1
20	NAPEC 53711-5532336 Sht 5, Detail 38E	Sensor, Intrusion	1
21	NAPEC 53711-5532336 Sht 5, Detail 38C	Bushing, Sensor	1
22	NAPEC 53711-5532336 Sht 5, Detail 34D	Bushing, Jackscrew	1

Table 3
MK 2 MOD 9 HSSH (Bolt-On)

Item	Drawing No.	Nomenclature	Quantity
1	NAPEC 5532334, Sht 2	Casting, Passive Door	1
2	NAPEC 5532334, Sht 3	Casting, Active Door	1
3	NCEL 83-15-1F	Plate, Mounting, Left	1
4	NCEL 83-15-1F	Plate, Mounting, Right	1
5	NCEL 83-15-1F	Capscrew, 1/2-13, NC Grade 8	18
6	NCEL 83-15-1F	Lockwasher, 1/2	18
7	NCEL 83-15-1F	Nut, Hex, 1/2-13, NC Grade 8	18
8	NCEL 83-15-1F	Bar, Backing, 1-foot 3-3/4-inch	2

Table 4
MK 2 MOD 9 HSSH With Anti-Intrusion Bar Cover (Bolt-On)

Item	Drawing No.	Nomenclature	Quantity
1	NAPEC 5532334, Sht 2	Casting, Passive Door	1
2	NAPEC 5532334, Sht 3	Casting, Active Door	1
3	NCEL 83-16-1F	Plate, Mounting, Left (large)	1
4	NCEL 83-16-1F	Plate, Mounting, Right (large)	1
5	NCEL 83-16-1F	Plate, Staple	1
6	NCEL 83-16-1F	Capscrew, 1/2-13, NC Grade 8	32
7	NCEL 83-16-1F	Lockwasher, 1/2	32
8	NCEL 83-16-1F	Nut, Hex, 1/2-13, NC Grade 8	32
9	NCEL 83-16-1F	Bar, Backing, 1-foot 3-3/4-inch	2
10	NCEL 83-16-1F	Bar, Backing, 6-1/2-inch	2
11	NCEL 83-16-1F	Bar, Backing, 4-inch	2
12	NAPEC 53711-5532336 Sht 2, Detail 13A	Housing, AIB	1
13	NAPEC 53711-5532336 Sht 2, Detail 10C	Staple, AIB	2
14	NAPEC 53711-5532336 Sht 2, Detail 10F	Lug, AIB	2
15	NAPEC 53711-5532336 Sht 3	Jackscrew, Inactive	1
16	NAPEC 53711-5532336 Sht 3, Detail 20F	Nut, Hold-Down	1
17	NAPEC 53711-5532336 Sht 4	Jackscrew, Active	1
18	NAPEC 53711-5532336 Sht 5, Detail 38E	Sensor, Intrusion	1
19	NAPEC 53711-5532336 Sht 5, Detail 38C	Bushing, Sensor	1
20	NAPEC 53711-5532336 Sht 5, Detail 34D	Bushing, Jackscrew	1

Table 5
HSSH and AIB Installation Tools

Item	Nomenclature	Quantity
1	Drill, Air-Driven, 1/2-inch (preferred)	1
1A	Drill, Electric, 1/2-inch (alternate)	
2	9/16-inch Transfer Punch	1
3	Bit, High-Speed, 9/16-inch With 1/2-inch Shank	2
4	Bit, High-Speed, 1/8-inch	2
5	Torque Wrench, 10-150 foot-pound, With 1/2-Square Drive	1
6	Socket, 3/4-inch With 1/2-inch Square Drive	1
7	Key, Hexagon, 3/8-inch With Handle	2
8	Hammer, Ball-Peen, 16-ounce	1
9	C-Clamp, Malleable Iron, 6-inch	2
10	Shim, Brass, 1- x 15- x 1/16-inch	4
11	Hacksaw, Standard-Cutting, 12-inch	1
12	Cold Chisel, 3/4- x 12-inch	2
13	Countersink (deburring), 3/4-inch	2
14	File, Half-Round Bastard, 10-inch	2

3.3 Plate Fabrication. Mounting plates are fabricated in accordance with the NCEL drawings listed in Paragraph 1.4. Use NCEL drawing No. 83-15-1F for installation of the HSSH only, and NCEL drawing No. 83-16-1F for the HSSH with AIB. Remove all rust, scale, and burrs before welding.

3.4 HSSH Mounting Plate Welding. All welding will be in accordance with MIL-W-8611. Use welding electrode 310-15 or 310-16, as required by MIL-E-22200/2.

3.4.1 MK 2 MOD 8 Without AIB. To weld mounting plates for the MK 2 MOD 8 HSSH without AIB, see Table 1 and proceed as follows:

(a) Place mounting plates on flat surface.

(b) Place assembly jig on mounting plates (Figure 1) with center rib of jig between mounting plates. Jig establishes 1/16 inch between plates. Clamp to mounting plates.

(c) Locate bottom attack shield halves on mounting plates using jig in accordance with Figure 1.

(d) Tack weld shield in place.

(e) Position clasp and cover (hasp sections) in assembly jig. Clamp to mounting plates.

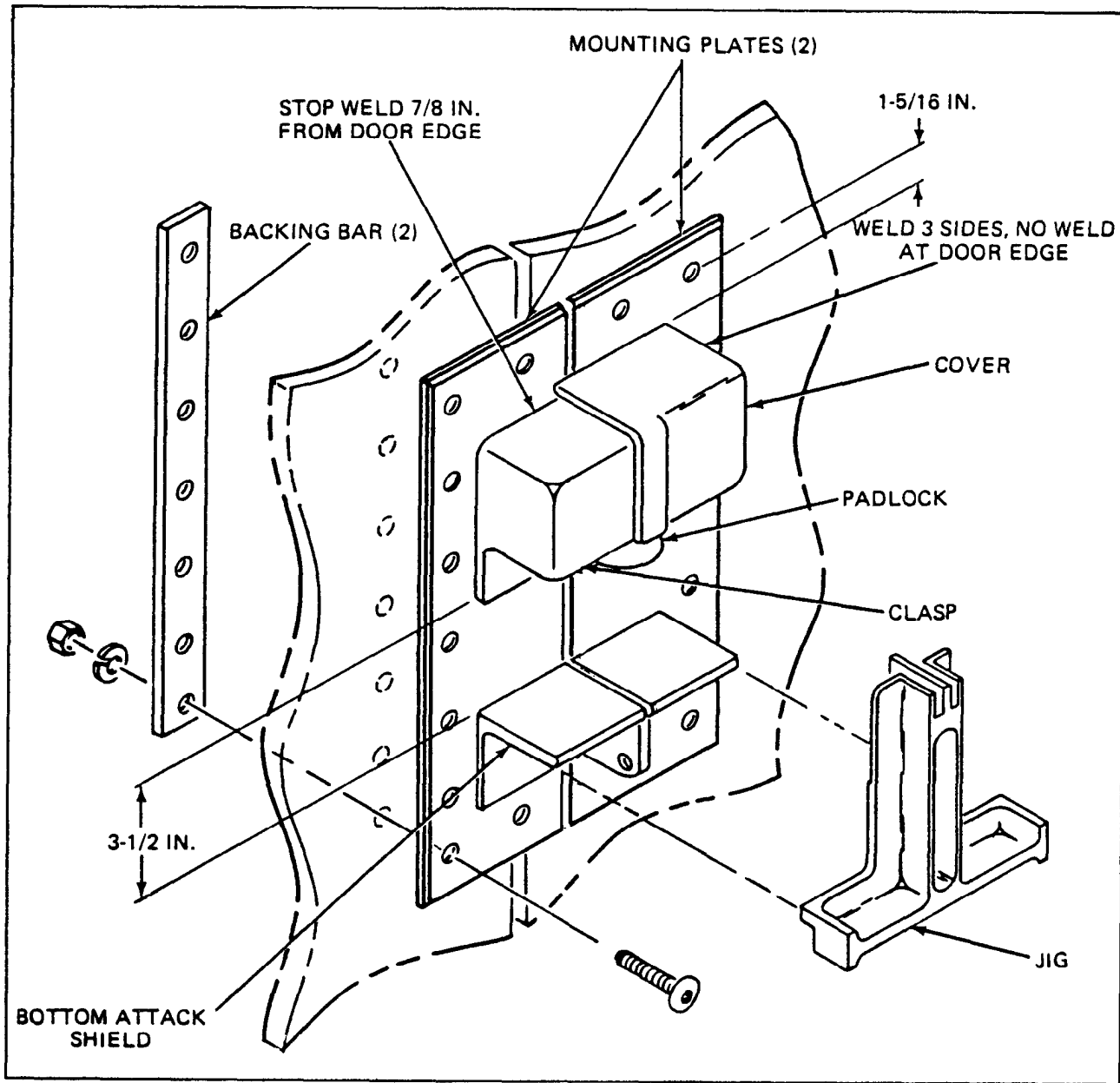


Figure 1. MK 2 MOD 8 HSSH Without AIB.

(f) Tack weld hasp in place.

(g) Remove jig and finish welding. Stop upper weld on clasp 7/8 inch from door edge. Do not apply weld at door edge of mounting plates (Figure 1).

(h) Clean up welded assemblies; treat in accordance with MIL-T-704; prime in accordance with MIL-P-52192; paint in accordance with MIL-E-52798. Match (approximately) color of magazine doors.

3.4.2 MK2 MOD 8 With AIB. To weld mounting plates for the MK 2 MOD 8 HSSH with AIB, see Table 2 and proceed as follows:

(a) Place mounting plates on flat surface.

(b) Place assembly jig on mounting plates with center rib of jig between mounting plates. Jig establishes 1/16 inch between plates. Clamp to mounting plates.

(c) Locate bottom attack shield halves on mounting plates in accordance with Figure 2.

(d) Tack weld shield in place.

(e) Position clasp and cover (hasp sections) in assembly jig. Clamp to mounting plates.

(f) Tack weld hasp in place.

(g) Remove jig and finish welding. Stop upper weld on clasp 7/8- inch from door edge. Do not apply weld at door edge of mounting plates (Figure 2).

(h) Refer to NCEL drawing 83-16-1F. Assemble and weld one staple (mark ae), two lugs (mark ab), holddown (locking) nut (mark af), and the sensor (jackscrew) bushing (mark ac) onto mounting plates (marks aa and ad). Assemble and weld one staple (mark ae) onto staple plate (BAR) (mark ag).

(i) Clean up welded assemblies; treat in accordance with MIL-T-704; prime in accordance with MIL-P-52192; paint in accordance with MIL-E-52798. Match (approximately) color of magazine doors.

(j) Place sensor into bushing.

3.4.3 MK 2 MOD 9 Without AIB. To weld mounting plates for the MK 2 MOD 9 HSSH without AIB, see Table 3 and proceed as follows:

(a) Locate passive and active door castings on mounting plates, flush with door edge of plates, in accordance with Figure 3.

(b) Tack weld both castings in place.

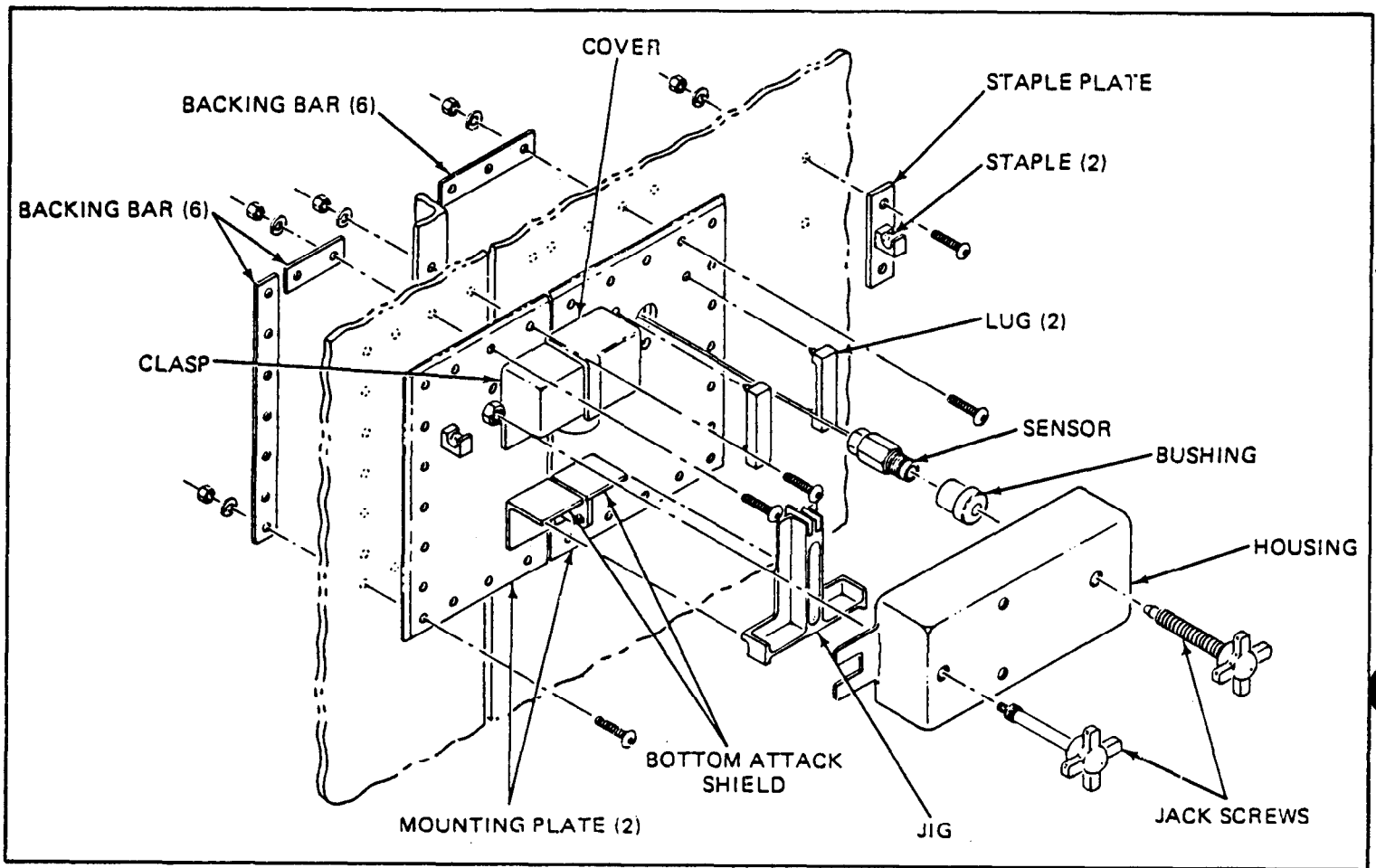


Figure 2. MK 2 MOD 8 HSSH With AIB.

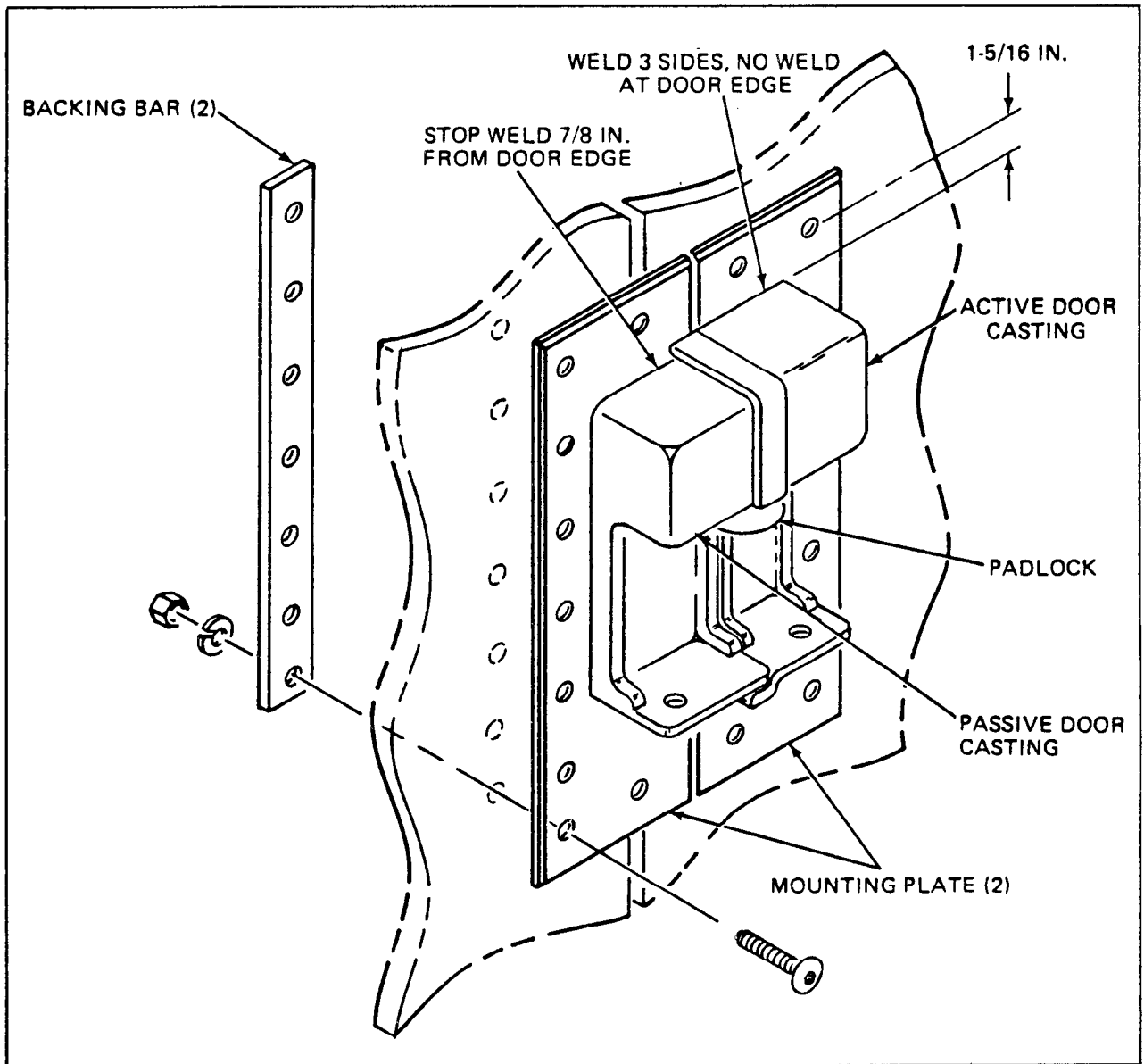


Figure 3. MK 2 MOD 9 HSSH Without AIB.

(c) Check plate-to-plate alignment and finish welding. Stop upper weld on passive door casting 7/8 inch from door edge. Do not apply weld at door edge of mounting plates (Figure 3).

(d) Clean up welded assemblies; treat in accordance with MIL-T-704; prime in accordance with MIL-P-52192; paint in accordance with MIL-E-52798. Match (approximately) color of magazine doors.

3.4.4 MK 2 MOD 9 With AIB. To weld mounting plates for the MK 2 MOD 9 HSSH with AIB, see Table 4 and proceed as follows:

(a) Locate passive and active door castings mounting plates, flush with door edge of plates, in accordance with Figure 4.

(b) Tack weld both castings in place.

(c) Check plate-to-plate alignment and finish welding. Stop upper weld in passive door casting 7/8 inch from door edge. Do not apply weld at door edge of mounting plates (Figure 4).

(d) Refer to NCEL drawing 83-16-1F. Assemble and weld one staple (mark ae), two lugs (mark ab), holddown (locking) nut (mark af), and the sensor (jack-screw) bushing (mark ac) onto mounting plates (marks aa and ad). Assemble and weld one staple (mark ae) onto staple plate (BAR) (mark ag).

(e) Clean up welded assemblies; treat in accordance with MIL-T-704; prime in accordance with MIL-P-52192; paint in accordance with MIL-E-52798. Match (approximately) color of magazine doors.

(f) Place sensor into bushing.

3.5 Preinstallation Checks and Actions. The Commanding Officer (CO) is responsible for the safety of any magazine alterations. The Safety Director (SD) reports directly to the CO in carrying out all safety-related responsibilities. For example, the SD must obtain permission from the CO to make magazine alterations. In addition, the SD shall develop and enforce safety working standards and conditions and establish safety training programs (NAVSEA OP 5, Paragraph 1-5). NAVSEA OP 5, Paragraph 2-1.18, requires that the following actions be taken before and during any maintenance and repair work:

(a) Check door fit and general condition.

(b) Verify that spark shield is in place and taped (if used).

(c) Check that only authorized tools will be used for HSSH and AIB installations.

(d) Check that installation personnel are equipped with required protective clothing and equipment, i.e., goggles, gloves, helmets, etc.

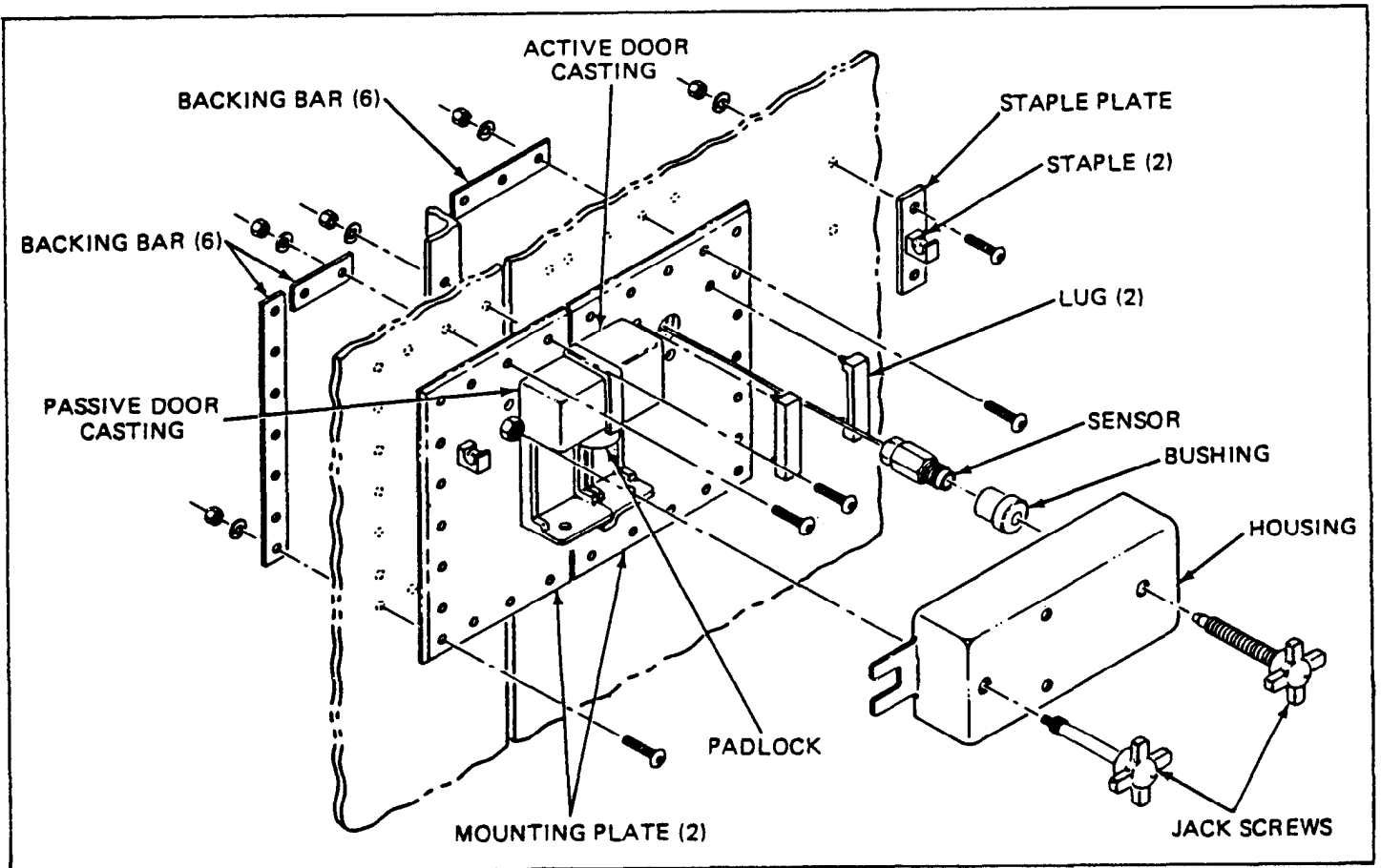


Figure 4. MK 2 MOD 9 HSSH With AIB.

(e) Check that areas immediately inside and outside entrance area are clean (NAVSEA OP 5, Paragraph 2-1.5).

(f) Place placards indicating work in process, warning all noninvolved personnel to remain clear. These placards shall be visible from 500 feet.

3.6 Magazine Door Preparation (Single- and Double-Door Thickness).

WARNING

**Do not perform any work on magazine doors
if explosives are within 10 feet of the
doors.**

3.6.1 General Considerations.

3.6.1.1 Stored Explosives. Before beginning any alterations, check to verify that all stored explosives are 10 feet or more from the magazine door. If not, report to the SD who will supervise their removal.

3.6.1.2 Realignment and Repainting. Magazine doors may need repainting or realignment prior to installation of the HSSH. Any undue sagging, worn hinges, poor fit in frame, or scraping on the threshold must be corrected. The gap between doors may vary from 1/16 to 1/2 inch providing the gap is covered by the astragal. Shimming the mounting plates is permitted.

3.6.1.3 Tool Power Sources. Air compressors (air driven drill) or generators (electric drill) must be positioned 100 feet from the magazine door. If necessary, the distance may be reduced to 75 feet at the discretion of the SD.

3.6.1.4 Fire Watch. A fire watch with type A:B:C extinguisher must be posted during door alterations. Only the approved tools listed in Table 5 shall be used for magazine door alterations.

3.6.1.5 CO Permission and Work Placards. The SD shall obtain permission in writing from the CO each time HSSH and AIB covers are installed. Placards that indicate that work is in process shall be posted, warning all noninvolved personnel to remain clear. These placards shall be visible from 500 feet.

WARNING

**Only tools listed in Table 5 shall be used for
door alterations.**

WARNING

If specified by the Safety Director, it must be verified that the spark shield is in place and all gaps are securely taped before making door alterations.

NOTE

Insofar as possible, doors shall be open when work is performed, particularly when drills, chisels, and saws are used.

3.6.1.6 General Preparation Steps.

(a) If directed by the SD, erect, fasten, and tape spark shield in place. See Figure 5 for suggested shield design and placement.

(b) Remove existing hasp with wrenches, wedges, or cold chisel as required.

(c) If necessary, remove section of astragal (Figure 6). The mounting plates are 1 foot 4-3/4 inches in height. Allowing 1/4-inch clearance top and bottom, resulting clear area should be 1 foot 5-1/4 inches. Use approved hacksaw and cold chisels.

3.6.2 Specific Considerations.

3.6.2.1 MK 2 MOD 8 and MOD 9 HSSH Without AIB. To mount the MK 2 MOD 8 or MOD 9 HSSH without AIB on a magazine door, proceed as follows:

(a) Place both mounting plate assemblies on flat surface.

(b) Place 1/16-inch shims (MOD 9) or jig (MOD 8) between plates and align top and bottom edges.

(c) Clamp plate assemblies together.

(d) Position clamped assemblies on doors. Place so that plate edges bisect gap between doors in accordance with Figure 1 or 3.

(e) Using 9/16-inch transfer punch, centerpunch 18 mounting holes.

(f) Drill 18 pilot holes, using 1/8-inch bit, and redrill to 9/16 inch.

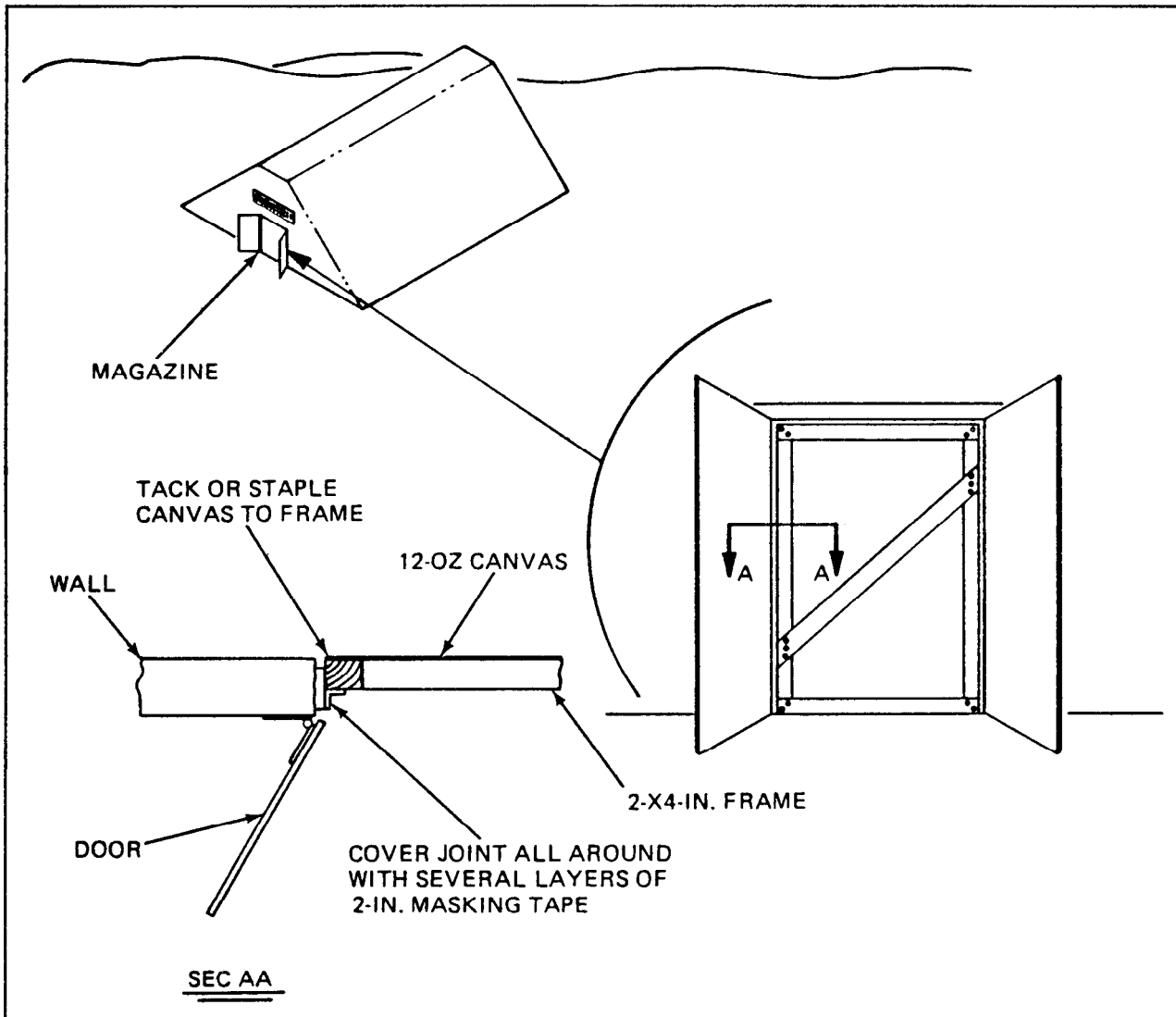


Figure 5. Suggested Spark Shield Design.

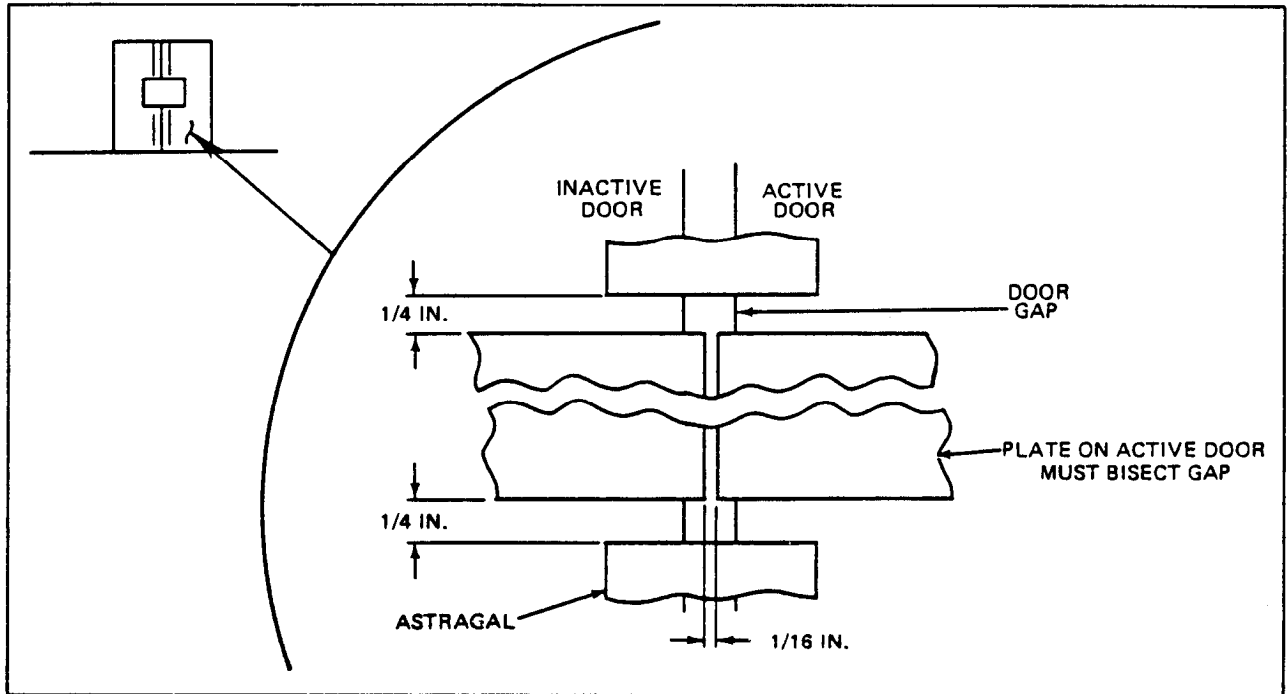


Figure 6. Door Preparation.

3.6.2.2 MK 2 MOD 8 and MOD 9 HSSH With AIB. To mount the MK 2 MOD 8 or MOD 9 HSSH with AIB on a magazine door, proceed as follows:

- (a) Place both mounting plate assemblies on flat surface.
- (b) Place 1/16-inch shims between plates (MOD 9) or jig (MOD 8) between plates and align top and bottom edges.
- (c) Clamp plate assemblies together.
- (d) Position clamped assemblies on doors. Place so that plate edges bisect gap between doors in accordance with Figure 2 or 4.
- (e) Using 9/16-inch transfer punch, centerpunch 30 mounting holes.
- (f) Locate staple/staple plate assembly on door in accordance with NCEL drawing No. 83-16-1F. Match-mark two holes.

(g) Lay out sensor wire clearance hole in accordance with NCEL drawing No. 83-16-1F.

(h) Centerpunch hole locations.

(i) Drill 32 pilot holes, using 1/8-inch bit, and redrill to 9/16 inch.

(j) Touch up all paint scars. Prime and paint all bare metal.

3.7 HSSH Installation.

WARNING

Spark shield must be in place and taped completely to the door jamb.

WARNING

Installation personnel must wear prescribed protective clothing.

NOTE

The SD shall obtain permission in writing from the CO each time the HSSH and AIB are installed.

3.7.1 MK 2 MOD 8 and MOD 9 HSSH. To install the MK 2 MOD 8 or MOD 9 HSSH on a magazine door, proceed as follows:

(a) Open and block double doors.

(b) Using two 1/2-inch bolts, lockwashers, and nuts, loosely assemble passive mounting plate to inactive door next to door edge (NCEL drawing No. 83-15-1F).

(c) Assemble active mounting plate to active door as above.

(d) Place 1/16-inch shims between plates, align top edges, and clamp plates together using C-clamp.

NOTE

MK 2 MOD 9 HSSH incorporate location buttons for spacing between plates. A 1/16-inch shim is not used for this type.

- (e) Center 1/16-inch plate in gap between doors. Tighten four bolts.
- (f) Remove C-clamp and open doors.
- (g) Assemble remaining 14 bolts, 2 backing bars, lockwashers, and nuts. Tighten securely.
- (h) Torque all nuts to 100 foot-pounds.
- (i) Open and close doors several times to check clearance and alignment. Readjust if necessary.
- (j) Stake all bolt threads at nuts in three places using center punch.
- (k) If MK 2 MOD 9 HSSH was installed, grind off all locator buttons (total of six). See NAPEC drawing No. 5532334, Sheet 2.

3.7.2 MK 2 MOD 8 and MOD 9 HSSH With AIB Cover. To install the MK 2 MOD 8 or MOD 9 HSSH with AIB cover on a magazine door, proceed as follows:

- (a) Open and block double doors.
- (b) Using two 1/2-inch bolts, lockwashers, and nuts, loosely assemble passive mounting plate to inactive door next to door edge (NCEL drawing No. 83-16-1F).
- (c) Assemble active mounting plate to active door as above.
- (d) Place 1/16-inch shims between plates, align top edges, and clamp plates together using C-clamp.

NOTE

MK 2 MOD 9 HSSH incorporate location buttons for spacing between plates. A 1/16-inch shim is not used for this type.

- (e) Center 1/16-inch plate in gap between doors. Tighten four nuts.
- (f) Remove C-clamp and open doors.
- (g) Assemble remaining 28 bolts, 6 backing bars, lockwashers, and nuts (Figure 2 or 4). Tighten securely.
- (h) Torque all nuts to 100 foot-pounds.

(i) Open and close doors several times to check clearance and alignment. Readjust if necessary.

(j) Stake all bolt threads at nuts in three places, using center punch.

(k) If MK 2 MOD 9 HSSH was installed, grind off all six locator buttons. See NAPEC drawing No. 5532334, Sheet 2.

(l) Using two 1/2-inch bolts, lockwashers, and nuts, loosely assemble staple plate assembly to door (Figure 2 or 4).

(m) Adjust location of staple plate to dimensions shown in NCEL drawing No. 83-16-1F.

(n) Torque both nuts to 100 foot-pounds.

(o) Stake each bolt thread at nut in three places using center punch.

Instructions for installing padlock and housing, connection for sensor, etc., are covered in other publications.

3.8 Checkout. To check out installation of the HSSH proceed as follows:

(a) Verify that all hardware is in place and welds are sound.

(b) Lock and unlock doors with S&G 831B padlock; check for binding and fit.

(c) Ensure that all nuts are staked securely in three places.

(d) Assemble AIB cover, energize sensor circuit, and test by unthreading jackscrew about 1/2 inch.

(e) Remove AIB cover. Assembly and removal of cover shall not evidence any binding or indicate poor fit.

(f) Remove and rotate cover. Secure and lock in storage position. Check for binding and fit.

(g) Check paint for scars or voids.

REFERENCES

Chief of Naval Operations Instruction available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

OPNAVINST 5530.13	Physical Security Instruction for Sensitive Conventional Arms, Ammunition, and Explosives
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Military Standards. Department of Defense activities may obtain copies from the Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

MIL-E-22200/2	Electrodes, Welding, Covered (Austenitic Chromium-Nickel Steel)
MIL-E-52798	Enamel, Alkyd, Camouflage
MIL-P-52192	Primer Coating, Epoxy
MIL-T-704	Treatment and Painting of Material
MIL-W-8611	Welding, Metal Arc and Gas, Steels, and Corrosion and Heat-Resistant Alloys; Process for

Naval Civil Engineering Laboratory (NCEL), Port Hueneme, CA, 93043.

DRAWINGS:

NCEL 83-15-1F	Physical Security, High-Security Hasp (Bolt-On), Assembly and Details
NCEL 83-16-1F	Physical Security, High-Security Hasp (Bolt-On) w/AIB Cover, Assembly and Details

Naval Facilities Engineering Command Instruction available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

NAVFACINST 5100.11	Command Safety and Health Program
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Naval Sea Systems Command Publication available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

NAVSEA OP 5	Ammunitions and Explosives Ashore
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Naval Weapons Support Center, Code 208, Crane, IN 47522-5020.

DRAWINGS:

NAPEC 0957	High-Security Hasp, Hinged or Sliding, Horizontal, RH MK 2 MOD 8
NAPEC 0961	Mounting Jig, High-Security Hasp, Hinged, MK 2 MOD 7

MIL-HDBK-1013/3

NAPEC 1297	Standard Plan - Installation Detail for Right-Hand Active Doors Using High- Security Hasp #0957
NAPEC 1302	Standard Plan - Anti-Intrusion Bar Installation Detail for Right-Hand Active Doors Using High-Security Hasp #0957
NAPEC 1403	High-Security Hasp Application and Installation Instructions for MK 2 MOD 9 Style 1
NAPEC 5532334	High-Security Hasp, MK 2 MOD 9 Hinged or Sliding, Horizontal Door Right- Hand Style 1
NAPEC 53711- 5532336	AIB System for High-Security Hasp

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